

Title (en)

NON-ELLIPTICAL CONTACT PROFILE FOR ROLLER BEARING

Title (de)

NICHTELLIPTISCHES KONTAKTPROFIL FÜR EIN WALZENLAGER

Title (fr)

PROFIL DE CONTACT NON ELLIPTIQUE POUR ROULEMENT À ROULEAUX

Publication

EP 4151873 A1 20230322 (EN)

Application

EP 22175637 A 20180420

Previously filed application

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Priority

- US 201762490392 P 20170426
- US 201762519464 P 20170614
- EP 18723204 A 20180420
- US 2018028521 W 20180420

Abstract (en)

A roller bearing comprises an inner race ring, an outer race ring and a roller arranged between and in contact with the inner and outer rings. The bearing has a flange (31) on the inner race ring at one axial end, and a flange (21) on the outer race ring at an opposite axial end. At least one of the flanges, or an end of the roller (46), has a profile including a principal segment (53) with a reference point C defining a contact location between the roller and the flange, the principal segment having a continuously changing radius of curvature, on both sides of reference point C, that decreases as a distance from the reference point C increases.

IPC 8 full level

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CPC (source: CN EP US)

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Citation (applicant)

- US 6530693 B1 20030311 - IJUIN SEIJI [JP], et al
- US 6997616 B2 20060214 - SAKODA HIRONARI [JP], et al

Citation (search report)

- [XY] EP 2309143 A1 20110413 - NTN TOYO BEARING CO LTD [JP]
- [Y] EP 2884126 A1 20150617 - SKF AB [SE]
- [A] US 2003012477 A1 20030116 - MURAI TAKASHI [JP], et al
- [A] WO 2017033977 A1 20170302 - NTN TOYO BEARING CO LTD [JP] & US 2018245627 A1 20180830 - KAWAI TAKASHI [JP]
- [A] US 2009003747 A1 20090101 - DE MUL JAN [DE]
- [AD] US 6530693 B1 20030311 - IJUIN SEIJI [JP], et al

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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DOCDB simple family (application)

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